(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 31 March 2005 (31.03.2005)

PCT

(10) International Publication Number WO 2005/029067 A3

(51) International Patent Classification7: C12Q 1/68

G01N 33/48,

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(21) International Application Number:

PCT/JP2004/011741

(22) International Filing Date: 10 August 2004 (10.08.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/505,571

24 September 2003 (24.09.2003) US

(71) Applicants (for all designated States except US): ON-COTHERAPY SCIENCE, INC. [JP/JP]; 3-16-13, Shirokanedai, Minato-ku, Tokyo, 1080071 (JP). THE UNIVERSITY OF TOKYO [JP/JP]; 3-1, Hongo 7-chome, Bunkyo-ku, Tokyo, 1138654 (JP).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): NAKAMURA, Yusuke [JP/JP]; 17-33, Azamino 1-chome, Aoba-ku, Yokohama-shi, Kanagawa, 2250011 (JP). KATAGIRI, Toyomasa [JP/JP]; 2-10-11-305, Higashigotanda, Shina-gawa-ku, Tokyo, 1410022 (JP). NAKATSURU, Shuichi [JP/JP]; 6-2, Shimoochiai 2-chome, Chuo-ku, Saitama-shi, Saitama, 3380002 (JP).
- (74) Agents: SHIMIZU, Hatsushi et al.; Kantetsu Tsukuba Bldg. 6F, 1-1-1, Oroshi-machi, Tsuchiura-shi, Ibaraki, 3000847 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 18 August 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF DIAGNOSING BREAST CANCER

(57) Abstract: Compositions and objective methods for detecting, diagnosing, and treating breast cancer (BRC) are described herein. In particular, the present invention describes three BRC-associated genes, referred to herein as A5657, B9769, and C7965, up-regulated in BRC cells as compared to normal cells. In one embodiment, the diagnostic method involves determining the expression level of a BRC-associated gene that discriminates between BRC cells and normal cells; in an alternate embodiment, the diagnostic method involves determining the expression level of a BRC-associated gene that discriminates among BRC cells, between DCIS cells and IDC cells. The present invention further provides methods of screening for therapeutic agents useful in the treatment of breast cancer, methods of treating breast cancer and methods for vaccinating a subject against breast cancer.

